CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

FACT SHEET

ORDER NO. R9-2002-0018
NPDES NO. CA0109029

WASTE DISCHARGE REQUIREMENTS FOR GROUNDWATER EXTRACTION WASTE DISCHARGES TO SAN DIEGO BAY FROM THE SAN DIEGO CONVENTION CENTER, SAN DIEGO COUNTY

A. CONTACT INFORMATION

Regional Water Quality Control Board Contact Person:

Ms. Sherrie Komeylyan
Industrial Compliance Unit
9174 Sky Park Court, Suite 100
San Diego, California 92123
Phone: (858) 467-2734
Fax: (858) 571-6972

San Diego Convention Center Contact Person:

Mr. Larry Wasserman
City of San Diego
Permits & Compliance Section
4918 North Harbor Drive, #201
San Diego, California 92106
Phone: (619) 758-2370

B. FACILITY DESCRIPTION

The San Diego Convention Center is located on an 11-acre site adjacent to San Diego Bay, west of the intersection of Harbor Drive and Fifth Avenue. The natural groundwater in the immediate vicinity of the Convention Center is hydraulically connected to San Diego Bay, and exists at an elevation of approximately sea level.

The piezometric surface (groundwater table) is at a higher elevation than the floor of the Convention Center underground parking garage. A dewatering system is used to prevent groundwater from inundating basement portions of the facility. The dewatering system consists of a series of subsurface drains under the Convention Center floor slab and continuous perimeter wall drains outside of the basement walls. The subsurface drains and wall drains discharge by gravity to four sumps. Each sump is equipped with two pumps, each capable of developing a flow of 200 gallons per minute against a 35-foot head. Initially, water collected from Sump Nos. 1 and 2 was discharged to a 51-inch diameter

storm drain, which empties into San Diego Bay at a location southeast of the Convention Center. Water collected in Sump Nos. 3 and 4 was discharged to the Bay via a 63-inch diameter storm drain, which emptied into the San Diego Bay near the foot of Fifth Avenue.

The existing general permit, Order No. 2000-90, NPDES Permit No. CAG919001, that the Convention Center is currently enrolled under does not allow permanent discharges of groundwater to San Diego Bay. The Convention Center discharge is permanent. The City of San Diego constructed the engineered outfall in order to obtain an individual NPDES permit. The outfall initiated operation on March 1, 2001. The sump pumps are currently pumping the extracted groundwater flow to the outfall for discharge to San Diego Bay.

C. DISCHARGE DESCRIPTION

The Convention Center dewatering system "cone of depression" extends to San Diego Bay. As a result, the dewatering system collects both local groundwater flowing toward the Bay, and Bay waters which flow inland toward the dewatering system collection points. Because of steeper groundwater gradients on the Bay side of the dewatering system, infiltrating Bay waters contribute significant proportions of the water collected in Sump Nos. 1 and 2.

It is estimated that approximately 73% of the overall dewatering flow collected in Sump Nos. 1 and 2 is derived from the Bay. Sump Nos. 3 and 4 primarily collect local groundwater flowing toward the Bay. It is estimated that approximately 28% of the flow collected in Sump Nos. 3 and 4 is from the Bay. The discharge is considered a saline discharge.

The outfall is discharging at a depth of approximately 35 feet. Nine horizontally-discharging ports located on alternating sides of the diffuser are spaced approximately 4.4 feet apart. Since the outfall is in a portion of San Diego Bay open to water traffic, a protective device is in place to minimize the potential for a ship anchor to damage or destroy the outfall. Further, the outfall is constructed so that the diffuser is suspended slightly above the Bay sediments. This minimizes the potential for:

1. Re-suspension of Bay sediments as a result of the discharge, and

2. The accumulation of naturally-occurring sediments over the outfall diffuser.

City of San Diego's Application indicated a combined average total flow of 0.67 million gallons per day, however records of flow measurements have indicated discharge volumes occasionally exceeding this number. Based on a review of recent flow measurement data, and the City of San Diego's use of diffusers at the outfall to reduce the impact of the discharge, the maximum flow from the facility permitted will be 1.0 million gallons per day.

Pollutants of Concern

As a result of many past activities, including leaking underground storage tanks and fuel lines, surface spills of wastes, and past use of liquid waste impoundments, groundwater extraction waste discharges pose the threat of discharging pollutants which may be present in groundwaters surrounding San Diego Bay. Much of the groundwaters in the downtown San Diego area are known to contain petroleum products and solvents mainly due to underground storage tank leaks and pipeline leaks.

Metals and other toxic constituents occur in San Diego Bay as a result of the following:

1. The naturally occurring ambient concentrations in sea water,

2. Naturally occurring storm runoff which discharges to the San Diego Bay, which includes urban runoff from municipal storm drain systems (MS4 discharges).

3. Point source discharges within sources within San Diego Bay,

4. Non point source discharges, and

5. Interaction of Bay waters with sediments.

Elevated concentrations of metals have been reported in sediments in portions of San Diego Bay and near marinas, ship anchorage or cargo handling sites, and military installations. Ambient metal concentrations in the water column in most areas of the Bay, are in general compliance with State and Federal water quality standards.

A portion of the total metals within the Convention Center discharge are dissolved, with the remainder being in particulate form.

Median total suspended solids concentrations of 14 mg/L were observed in the combined discharge from the Convention Center Dewatering system during 1994-2000.

The dewatering system effluent includes trace quantities of several chlorinated hydrocarbon compounds, and a phthalate compound. The occurrence of the phthalate compound is probably due to some form of sample contamination. The trace chlorinated hydrocarbon compounds may be from cleansers or degreasers that have been washed into the sumps from the parking garage.

Minimal toxicity was observed in the shrimp or minnow toxicity tests; percent survival ranged from 90 to 100 percent for all dilutions of the Convention Center groundwater extraction effluent.

No growth or mean weight effects on minnows were observed in the chronic 7-day test.

For the diatoms, the “no observed effect concentration” was at a 50% effluent concentration, while the “lowest observed effect concentration” was at a 100% effluent concentration.

To address the failing toxicity tests for diatoms, the City of San Diego installed temporary carbon units on sumps 1 & 2. The Aqua Scrub 1200 units, are 5-foot tall, 45.5-inch diameter pressure carbon adsorption vessels, which hold approximately 1,000 pounds of granular reactivated carbon. These carbon units are plumbed into the flow stream of each of the four sumps’ effluent. The pumps and carbon units are now permanent and they have been on-line on sumps 1 and 2, since October 29, 2001.

In 1998, the U.S. Environmental Protection Agency (USEPA) approved methodology 200.7 for the analysis of metals in water which is intended/best suited for analysis of non-saline (fresh) water samples.

A new methodology (1638 and 1640), "clean technologies" is more suitable for saline (salt water) samples.

In July 1998, the USEPA approved the use of Method 1638 and 1640 by the San Diego Unified Port District for analysis of metals in saline samples.

Water Quality monitoring data collected from the discharge during 1993-1996 indicated that the discharge was not in compliance with water quality standards within Order Nos. 90-31 and 95-25 for silver, copper, and zinc. In response to this non-compliance, the Regional Board Executive Officer issued Notice of Violation No. 97-06 on January 22, 1997. In response, the San Diego Unified Port District (SDUPD), owner at the time, switched to more appropriate methodology (1638/1640 clean technologies) for analysis of metals. Since 1997, the Convention Center groundwater extraction effluent has been in violation of the Waste Discharge Requirements for Chronic Toxicity, Total Suspended Solids, Arsenic, Copper, Nickel, and Hexavalent Chromium. Most of these exceedances were as a result of the use of an inappropriate method for the analysis of saltwater samples.

The use of method 200.7 methodology has resulted in exceedances of effluent limits established in Order No. 2000-90. Method 200.7 is inappropriate for the analysis of saline water samples.

The Implementation Policy for the California Toxics Rule (CTR) requires a reasonable potential analysis for 126 priority pollutants. The 126 priority pollutants listed in the CTR includes 15 metals. An analysis of metal concentrations will be conducted when the priority pollutants sampling for the CTR is completed.

Additionally the City of San Diego shall conduct the following interim monitoring using the 1638/1640 clean lab technologies methods for Arsenic, Nickel, Copper, and Hexavalent Chromium at a frequency of weekly, or at least 5 days apart, for 6 sampling events no later than May 12, 2002. A total of three samples shall be taken per sampling event at the following locations:

1) Sumps 1 and 2;

2) Sumps 3 and 4; and

3) Ambient waters for a total of 18 data points

The monitoring results shall be submitted to the Regional Board no later than June 12, 2002.

D. PERMITTING HISTORY

On April 23, 1990, this Regional Board adopted Order No. 90-31, National Pollutant Discharge Elimination System (NPDES) No. CA0108707, *General Waste Discharge Requirements for Groundwater Dewatering Waste Discharges to San Diego Bay or Tributaries Thereto, San Diego County*. Order No. 90-31 and Technical Change Order No. T-1 thereto, contain an expiration date of April 23, 1995.

On September 26, 1991, the State Water Resources Control Board (SWRCB) adopted Order No. WQ91-10 which amended Regional Board Order No. 90-31.

On April 23, 1993, the Regional Board enrolled the San Diego Unified Port District, San Diego Convention Center permanent groundwater extraction discharge under Order No. 90-31.

In May 1995, the Regional Board adopted Order No. 95-25 (NPDES CAG919001), which superseded Order No. 90-31. The Convention Center discharge continued enrollment under Order No. 95-25.

In November, 1999, the City of San Diego officially transferred responsibility from the San Diego Unified Port District to the City of San Diego for the discharge of groundwater to San Diego Bay from the San Diego Convention Center Groundwater Extraction and Treatment System.

In June 2000, San Diego Regional Water Quality Control Board adopted Order No. 2000-90 (CAG919001), *General Waste Discharge Requirements for Temporary Groundwater Extraction and Similar Waste Discharges to San Diego Bay and Storm Drains or Other Conveyance Systems Tributary Thereto*. Due to the City of San Diego establishing an engineered outfall for the disposal of extracted groundwater from the Convention Center to the San Diego Bay, an individual permit is more appropriate.

E. RECEIVING WATER

Currents, tides, and density profiles within San Diego Bay are important factors that will influence the fate and transport of groundwater extraction effluent constituents discharged through an engineered outfall.

The density of Bay waters is a key factor affecting the fate of water discharged through an engineered outfall. Groundwater extraction effluent will be at a relatively constant temperature. Historic data, however, show that the groundwater extraction effluent salinity may vary slightly over time. Temperature and salinity within San Diego Bay varies with tidal cycles and seasonal cycles. Vertical density differences are greatest during summer months when temperature is a dominant influence.

During ebb tide, the tide begins to flow out of the Bay first along the shorelines. The flow then strengthens in the mid channel and along the northern bank, with current speeds reaching a peak of approximately 40 cm/sec.

The Regional Board will issue Waste Discharge Requirements, an individual NPDES permit for the discharge of groundwater to San Diego Bay from the Convention Center containing the same effluent limits contained in General NPDES Permit Order No. 2000-90.

The City's application submittal on May 22, 2000 coincided with USEPA's final promulgation of the CTR on May 18, 2000. The CTR applies to discharges to enclosed bays. As such, the Convention Center discharge is subject to the requirements of the CTR. Therefore, the City of San Diego shall conduct sampling and analysis for the 126 CTR constituents, and a reasonable potential analysis by May 12, 2002, and submit this information to the Regional Board by June 12, 2002.

The Water Quality Control Plan for the San Diego Basin (Basin Plan) establishes the following beneficial uses for San Diego Bay:

- Navigation
- Body-Contact Recreation
- Non-Contact Recreation
- Commercial and Sport Fishing
- Marine Habitat
- Fish Spawning
- Shellfish Harvesting;
- Estuarine and Wildlife Habitat
- Migration of Aquatic Organisms
- Preservation of Habitats of Special Significance
- Aquaculture
- Preservation of Rare and Endangered Species
- Industrial Service Supply

F. BASIS FOR WASTE DISCHARGE REQUIREMENTS

Local, State, and Federal Waste Discharge Requirements

The discharge of extracted groundwater threatens to cause or contribute to excursions above narrative water quality objectives as a result of the discharge of petroleum related compounds, metals, and organics. On May 26, 1989, the U.S. EPA enacted revisions to 40 CFR 122 (NPDES regulations). When a proposed discharge of a compound or chemical threatens to cause or contribute to an excursion above a State narrative water quality standard and a numeric water quality standard for the specific chemical has not been established, the NPDES revisions require[1] the Regional Board to:

a. Establish an effluent limitation using a proposed State water quality objective or standard or an explicit State policy or regulation interpreting its narrative water quality objective which will protect and maintain water quality and designated beneficial uses of the receiving water;

b. Establish effluent limitations on a case-by-case basis, using EPA's water quality criteria published under 307(a) of the Federal Clean Water Act; or

c. Establish effluent limitations on an indicator parameter for the pollutants of concern (State Board memorandum dated November 3, 1989).

In addition to provisions that are standard to this Regional Board, 40 CFR 122.5, 122.21-.22, 122.41, and 122.61-64 incorporate additional conditions that are to be applied to all NPDES permits, either expressly or by reference.

On June 8, 1989, the SWRCB submitted an application to the U.S. EPA requesting revisions to its NPDES program in accordance with 40 CFR 123.62 and 403.10. The application included a request to add general permit authority to its approved NPDES program. States may request authority to issue general permits pursuant to 40 CFR 122.28. On September 22, 1989, the EPA, Region IX, approved the SWRCB's request and granted authorization for the State's issuance of general NPDES permits.

On January 1, 1998, Senate Bill (SB) 521 was passed. SB521 adds language to the Health & Safety Code which is applicable to leaking underground storage tanks as follows: "Section 25299.37.1. No closure letter pursuant to this chapter shall be issued unless the soil or groundwater, or both, where applicable, at the site have been tested for Methyl Tertiary Butyl Ether (MTBE) and the results of that

testing are known to the Regional Board." Subsequently, on February 20, 1998, the San Diego Regional Board, Site Mitigation & Cleanup Unit, issued written notification to interested parties of *Mandatory MTBE Sampling For Underground Storage Tank (UST) Site Closures-Senate Bill (SB) 521*. The February 20, 1998 notification specifies that "For ground water impacted sites or soil sites that may threaten ground water, both soil and ground water sampling and analysis for MTBE will be required." The Porter-Cologne Water Quality Control Act (January 1, 2000), Sections 13272.1 and Section 13285 address discharges of MTBE.

The State of California Enclosed Bays and Estuaries Policy was established by the SWRCB in State Board Resolution No. 74-43, *Water Quality Control Policy for Enclosed Bays and Estuaries of California*. The Enclosed Bays and Estuaries Policy establishes a goal of phasing out all municipal wastewater discharges (excluding cooling water or other innocuous discharges) to bays and estuaries, and establishes a series of discharge prohibitions, including:

a. Prohibiting new discharges of municipal wastewater and industrial process waters (exclusive of cooling waters, brine wastes, or other innocuous wastes),

b. Municipal or industrial waste sludge, supernatant, centrate, or filtrate,

c. Rubbish or refuse,

d. Silt, sand, soil, clay, or other earthen materials that may impact the designated beneficial uses,

e. Material of petroleum origin which may be visible or cause violation of discharge requirements, and

f. Radiological, chemical, biological, or radioactive wastes.

The California Ocean Plan sets forth water quality objectives for ocean waters. The Ocean Plan defines ocean waters as being "outside of enclosed bays, estuaries, and coastal lagoons". While, technically, water quality objectives established within the Ocean Plan are not applicable within San Diego Bay, the Ocean Plan objectives offer an excellent reference point to assess potential impacts to designated beneficial uses. In establishing Order No. 2000-90, *General Waste Discharge Requirements for Groundwater Extraction and Similar waste Discharges to San Diego Bay*, the Regional Board has seen fit to apply Ocean Plan water quality objectives in the regulation of groundwater discharges to San Diego Bay. The Ocean Plan also establishes receiving water quality objectives to be achieved after initial dilution.

The SWRCB adopted the Consolidated Toxic Hot Spot Cleanup Plan (Consolidated Plan) on June 17, 1999, required under Bay Protection and Toxic Cleanup Program (CWC Section 13395). The Consolidated Plan requires Regional Boards to reevaluate waste discharge requirements for those discharges associated with each known toxic hot spot that can reasonably be expected to cause or contribute to the creation and maintenance of the known toxic hot spot. The Regional Board found that discharges from groundwater extraction activities may contribute to the pollution at the toxic hot spots listed in the Consolidated Plan. In the event that future groundwater extraction waste discharges are proposed to an area of San Diego Bay that is designated as a toxic hot spot, staff will review both the

Discharge Specifications and the Monitoring and Reporting Programs for appropriate modification(s). The Consolidated Plan listed five known toxic hot spots located in San Diego Bay as follows:

- B Street and Broadway Piers
- Switzer Creek
- Foot of Evans and Sampson Street
- Chollas Creek
- Seventh Street Channel/Paleta Creek (Naval Station)

The Convention Center discharge of groundwater to San Diego Bay is in the vicinity of Switzer Creek, a toxic hot spot.

Since groundwater discharged to San Diego Bay must not contain pollutants in excess of applicable receiving water quality objectives contained in Table B of the *Water Quality Control Plan for Ocean Waters of California,* 1997 (Ocean Plan) because the assumed initial dilution factor for the discharge is zero, a discharge could not cause an excursion from receiving water quality objectives for Table B objectives if the discharge is in compliance with the effluent limitations contained in the permit. Thus, receiving water monitoring is not necessary for Table B constituents provided each discharge complies with the effluent limitations of the permit.

Groundwater extraction waste discharges as limited by the permit will not conflict with the *Water Quality Control Policy for the Enclosed Bays and Estuaries of California* (Bays and Estuaries Policy) provided that discharges comply with Discharge Specification No. B.1 of the permit. However, groundwater extraction waste discharges could potentially conflict with the Bays and Estuaries Policy if petroleum related compounds of other pollutants are discharged to San Diego Bay.

In the adoption of waste discharge requirements and effluent limitations to protect the beneficial uses of waters of the State, the Porter-Cologne Water Quality Control Act, Sections 13000 et seq., authorizes the use of relevant water quality objectives or other criteria in the absence of numerical effluent concentration limitations in the Bays and Estuaries Policy.

The Water Quality Control Plan for the San Diego Basin (Basin Plan) establishes beneficial uses for San Diego Bay and establishes policies and objectives for the protection of the designated beneficial uses.

Since the Convention Center groundwater extraction effluent does not contain any known measurable quantities of total or fecal coliform, *E. coli*, enterococcus, ammonia, phosphorus, it is expected that the discharge will be in compliance with the applicable Basin Plan numerical water quality objectives. It is also expected that the discharge will comply with the Basin Plan numerical objectives for pH and the narrative objective for grease and oil.

40 CFR 131.38 – California Toxics Rule (CTR) and Implementation Policy

On May 18, 2000, the U.S. Environmental Protection Agency (USEPA) promulgated the final CTR, 40 CFR 131.38. The CTR restored California's water quality standards for inland surface waters. The previous inland surface waters plan, which contained water quality criteria for priority toxic pollutants, was dismissed in 1994 when a State court overturned the State Board's plan.

The water quality criteria established in the CTR, 40 CFR 131.38, is legally applicable in the State of California for inland surface waters, and enclosed bays and estuaries for all purposes and programs under the Clean Water Act.

On March 2, 2000, the State Board, in *Resolution No. 2000-15*, adopted a *Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (Implementation Policy). The Implementation Policy implements the criteria for the 126 priority pollutants in the CTR. The State Board's Implementation Policy was effective on April 28, 2000.

The Implementation Policy establishes:

a. implementation provisions for priority pollutant criteria promulgated by the USEPA through the National Toxic Rule (NTR) and the CTR, and for priority pollutant objectives established in the Basin Plan;

b. monitoring requirements for 2,3,7,8-TCDD (tetrachlorodibenzo-p-dioxin) equivalents; and

c. Chronic toxicity control provisions.

Pursuant to Section 2.2.2.A of the Implementation Policy, the Regional Board shall require the discharger to collect data to determine if effluent limits are necessary. In order to evaluate the reasonable potential for priority pollutants, the WDR and Monitoring and Reporting Program (MRP) requires the discharger to analyze its discharge and the receiving waters for priority pollutants, and to submit the data to the Regional Board prior to May 12, 2002.

Once the monitoring for the priority pollutants is submitted to and evaluated by the Regional Board, the Regional Board may either;

- Request additional priority pollutant monitoring pursuant to Section 13267 of the Porter-Cologne Water Quality Control Act,

- Determine that there is no reasonable potential for the discharge to cause an exceedence of the water quality criteria,

- Reopen the WDR and recommend discharge limits for priority pollutants in the discharge that have a reasonable potential to cause an exceedence of the water quality criteria.

- Reopen the WDR to modify pollutants with existing effluent limitations to comply with the more stringent CTR limits.

Pursuant to *Section 1.4.4 Intake Water Credits* (p.17) of the Implementation Policy, a Regional Board may consider priority pollutants in the intake water on a pollutant-by-pollutant and discharge-by-discharge basis when establishing water quality-based effluent limitations.

Best Professional Judgment/Best Available Technology

Hydrogen sulfide is a by-product of the decomposition of organic matter (particularly proteins) under anaerobic conditions, and is found in petroleum products. Groundwater extraction waste discharges in the Los Angeles area have contained high concentrations of hydrogen sulfide. Based on best professional judgement, groundwaters surrounding San Diego Bay may also contain high concentrations of hydrogen sulfide. Order No. R9-2002-0018 contains an effluent limitation for hydrogen sulfide to protect the water quality of San Diego Bay.

Groundwater pollutant plumes are often complex mixtures of hundreds of petroleum related compounds (e.g. gasoline contains over 200 chemical compounds) which makes complete chemical analyses very expensive and sometimes impracticable or impossible due to sample matrix interferences, constituent masking, or the lack of standard analytical techniques. Since water quality criteria for many of the petroleum hydrocarbon compounds have not been proposed or established by the State or EPA, the permit will require monitoring groundwater discharged using "indicator constituents" for the detection and evaluation of complex mixtures of petroleum related compounds such as gasoline and solvents. The indicator constituents used for evaluating compliance with the narrative water quality criteria in the permit for discharges of gasoline related products are benzene, ethylbenzene, toluene, xylene, and total petroleum hydrocarbons, since it is believed that fuels have been adequately studied to justify limiting the analysis to these compounds.

In order to minimize potential impacts from groundwater extraction waste discharges on the beneficial uses of San Diego Bay, this Order requires the application of best available technology economically achievable (BAT)[2] for the removal of organic pollutants commonly found in petroleum polluted groundwaters. Discharges in compliance with BAT-based effluent limitations contained in Discharge Specification No. B.l. of this Order are not expected to have a measurable impact on the beneficial uses of San Diego Bay as a result of the discharge of petroleum related compounds since the effluent limitations for these compounds are equal to the practical quantitation level. Such compounds will essentially be non-detectable in discharges of groundwater extraction waste discharges to San Diego Bay.

This Order establishes effluent limitations and monitoring requirements for BTEX and TPH which will ensure that volatile petroleum related compounds will be removed from the waste stream. This Order also establishes effluent limitations and monitoring requirements for indicator constituents of diesel fuels (TPH-diesel)[3] commonly found in polluted groundwaters.

It has been demonstrated that volatile pollutants (e.g., benzene, toluene, ethylbenzene, xylene, etc.) and many other organic pollutants in groundwater can be reduced to less than current analytical detection limits (0.5 to 10 micrograms per liter (μg/L) using available standard treatment technologies[4]. Section 402(a)(l) of the Clean Water Act authorizes the issuance of best available technology (BAT) effluent limitations in NPDES permits using best professional judgement (BPJ). Thus, BAT (best available technology economically achievable) for the removal of organic compounds is the basis for effluent limitations for BTEX and other volatile hydrocarbons, and base/neutral compounds (volatile hydrocarbons and base/neutral compounds are listed in 40 CFR 136) in Discharge Specification No. B.l of this Order. Establishing an effluent limitation of 5 μg/L for benzene ensures that other volatile organic compounds of concern will be equally limited as well since benzene is more water soluble and

less volatile than the majority of the volatile compounds of concern and has a lower adsorption capacity for granular activated carbon. Therefore, benzene is usually the most difficult compound to remove from a waste stream - the remaining compounds of concern will be sufficiently removed if benzene is removed from the waste stream, whether treatment consists of aeration, adsorption, or a combination of the two processes.

In establishing effluent limitations based on BAT, the Regional Board has taken into consideration the following factors:

a. The appropriate technology for the category or class of which the discharger is a member;

b. The age of equipment and facilities involved;

c. The process employed;

d. The engineering aspects of the application of various types of control techniques;

e. Process changes;

f. The cost of achieving such effluent reduction;

g. Non-water quality environmental impact (including energy requirements); and

h. Known and potential groundwater contaminants in the vicinity of groundwater extraction operation covered under this Order.

G. ANTIDEGRADATION POLICIES

Pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (collectively "antidegradation policies"), the Regional Board shall ensure that any increase in pollutant loading to a receiving water meets the requirements stated in the foregoing policies. At a minimum, permitting actions shall be consistent with the following:

1. Existing instream water uses and the level of water quality necessary to protect existing beneficial uses shall be maintained and protected;

2. Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, the quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located;

3. Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected; and

4. In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with Section 316 of the Clean Water Act.

The Regional Board, in establishing the requirements contained herein, has taken into consideration the requirements of the State and Federal "antidegradation" policies and has determined that:

1. The requirements, conditions, and Reporting Requirements Section E of the Order which requires a discussion of compliance with antidegradation policies, and effluent limitations established in this Order for discharges of groundwater to receiving waters, ensure that the existing beneficial uses and quality of the proposed receiving waters be maintained and protected;

2. Allowing groundwater extraction waste discharges to receiving waters is often necessary to allow groundwater remediation and accommodate economic development or infrastructure repair or replacement, important to the people of the communities of the San Diego region;

3. No receiving waters covered under the terms and conditions of this Order have been designated an outstanding national resource water by the SWRCB. However, Heisler Park Ecological Reserve, located in coastal waters near the City of Laguna Beach, the San Diego-La Jolla Ecological Reserve and the San Diego Marine Life Refuge, located in coastal waters near La Jolla, a community of the City of San Diego, have been designated an Area of Special Biological Significance (ASBS) by the SWRCB. The Ocean Plan contains the following prohibition applicable to ASBS:

   "Waste shall not be discharged to areas designated as being of special biological significance. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas."

4. Thermal discharges potentially impairing water quality are not authorized under the terms and conditions of this Order, thus, Section 316 of the Clean Water Act is not applicable.

Effluent limitations, and inland surface waters criteria, and enclosed bays and estuaries criteria established under Sections 301, 302, 303(d), 304, 306, and 402 of the Clean Water Act (CWA), as amended (33 U.S.C. 1251 et seq.), are applicable to discharges of groundwater extraction waste.

In order to show compliance with antidegradation policies, the City of San Diego must submit the report required by Reporting Requirements (Section E) of the Order, which requires discussing compliance with the antidegradation policies.

H. EXPIRATION DATE

The expiration date of Order No. R9-2002-0018 is March 13, 2007.

I. WRITTEN COMMENTS

Interested persons are invited to submit written comments regarding the tentative Order No. R9-2002-0018. Comments should be submitted either in person or by mail to:

Executive Officer
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, California 92123

All written comments received prior to March 6, 2002 will be considered in the formulation of final determinations.

J. PUBLIC HEARING

Tentative Order No. R9-2002-0018 will be considered by the Regional Board at a public hearing to be held at the San Diego Regional Water Quality Control Board Meeting Room, 9174 Sky Park Court, Suite 100, San Diego, California beginning at 9:00 a.m. on March 13, 2002.

K. REVIEW OF WASTE DISCHARGE REQUIREMENTS

Copies of the waste discharge requirements and other documents (other than those that the Executive Officer maintains as confidential) are available at the Regional Board office for inspection and copying according to the following schedule (except holidays):

Monday and Thursday:	1:30 p.m. to 4:30 p.m.
Tuesday and Wednesday:	8:30 a.m. to 11:30 a.m. and 1:30 p.m. to 4:30 p.m.
Friday:	8:30 a.m. to 11:30 a.m.

L. AVAILABILITY OF INFORMATION

For additional information, interested persons may write to the address mentioned in Section I. of the Order or contact Sherrie Komeylyan of the Regional Board staff at (858) 467-2734 or by sending an email to *komec@rb9.swrcb.ca.gov.*

ENDNOTE REFERENCES:

1. 40 CFR 122.44(d)(I)(vii) requires that if indicator monitoring parameters are used, the following four provisions must be fulfilled:

   a. The permit identifies which pollutants are intended to be controlled by use of the indicator effluent limitations,

   b. The fact sheet sets forth the basis for each indicator chemical's effluent concentration limitation and includes a finding that compliance with the limit on the indicator constituent will result in controls on the pollutant(s) of concern which are sufficient to attain and maintain waste quality standards,

   c. Effluent and receiving water quality monitoring to show the limit on the indicator parameter attains and maintains applicable water quality standards, and

   d. The permit contains a re-opener clause.

   Each of the preceding conditions for inclusion of indicator parameter monitoring has been addressed in this Order, the attached Monitoring and Reporting Program, or the Fact Sheet for the Order.

2. "Best available technology economically achievable" refers to the best treatment technologies available which have been determined to be cost effective, reliable, and efficient by the United States Environmental Protection Agency (U.S. EPA) or State Water Resources Control Board (SWRCB) or Regional Water Quality Control Board (RWQCB).

3. Diesel fuel consists primarily of straight-chain hydrocarbons (alkenes and alkanes) ranging in length from C10 to C23 with C16 and C17 predominating. The C10-C30 straight-chain hydrocarbons can be quantified in groundwater using standard analytical techniques (e.g., California Department of Health services; recommended analytical procedure for total petroleum hydrocarbons – diesel, (LUFT Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure, October 1989), base/neutral organic analytical techniques contained in 40 CFR 136). Since the predominant components of diesel fuel are the straight-chain hydrocarbons, the total petroleum hydrocarbon – diesel standard testing method contained in the LUFT Manual is used as the indicator of diesel fuel-contaminated groundwaters. Groundwater gasoline remediation projects may use standard TPH methods.

4. *Leaking Underground Fuel Tank Manual (LUFT): Guidelines for Site Assessment. Cleanup, and Underground Storage Tank Closure*, State of California, Leaking Underground Fuel Tank Task Force, established May 1988.